



EUROPEAN COMMISSION  
DIRECTORATE GENERAL FOR ENTERPRISE AND INDUSTRY

Director general

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Mr Julius Genachowski  
Chairman  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC, 20554  
United States of America

Dear Mr Genachowski,

I am writing to express our deep concerns about the LightSquared system that is proposed for operation in frequencies immediately below the radionavigation-satellite service (RNSS) allocation at 1559-1610MHz. This band is the core band used by global satellite navigation systems including GPS and you are no doubt aware that Europe is at the advanced planning stage for its own system, Galileo, which will be operational by 2014/15, and that will also use this RNSS allocation.

The band immediately below 1559MHz, allocated by the Radio Regulations to the mobile-satellite service (MSS), has been used for satellite based transmissions for many years and has proved to be broadly compatible with RNSS systems above 1559MHz. The LightSquared proposal for a terrestrial network deployment in MSS spectrum would completely change the nature of radio transmissions in the band. What are now neighbour MSS transmissions at similar receive power levels to RNSS would in future be many orders of magnitude higher and with the potential to severely disrupt reception of RNSS signals.

Analysis carried out in Europe, including by our own technical partner the European Space Agency, has shown that transmissions from LightSquared base-stations do indeed have considerable potential to cause harmful interference to Galileo receivers operating in the United States. Interference effects have been determined to occur in the range 100m to almost 1000km, depending on the type of receiver being used. This obviously presents a grave threat to the viability of providing a Galileo service covering US territory – a service which many studies have shown will not only benefit Galileo users, but those of GPS too as the two systems will be interoperable through a common signal design providing significantly improved coverage and accuracy in urban environments.

The European Commission is also concerned about potential impacts to safety critical aviation applications. Europe is covered by the EGNOS system, which is equivalent and interoperable with the US WAAS, and so it is vital that EGNOS/WAAS receivers fitted to aircraft entering US airspace do not suffer degradation to the availability and reception of their navigation signals.

The Galileo system will also contribute to the global COSPAS-SARSAT system through the MEOSAR programme and includes a dedicated space-to-Earth link in the band 1544-1545MHz acting as a return channel to distress beacons, in accordance with Article 31 of the Radio Regulations. Intended for the maritime and aviation sector the possibility of disruption to this safety related application within US territory should not be ignored.

Whilst recognising that the rules governing worldwide radio usage, enshrined in the ITU Constitution and the Radio Regulations, allow the USA freedom to decide on spectrum matters within its own territory, Article 4 of the Radio Regulations makes it clear that ITU Members States are expected not to cause harmful interference to systems of another country that operate in accordance with the Radio Regulations.

We are confident that the process put in place by the FCC to deal with internal US concerns about the threat to GPS reception will reach appropriate conclusions and that these will take into account our own concerns about reception of Galileo signals. However, the receivers may not have identical characteristics and therefore we would be grateful that Galileo and EGNOS receivers will also be taken into account within the FCC's decision making process, thus giving us sufficient assurance that users will be able to receive Galileo and WAAS signals in US territory without risk of harmful interference.

Yours sincerely,



Heinz Zourek